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(54) Title: LINEAR MOVING CAPACITIVE SENSOR TWIN COLUMN ELECTRONIC HEIGHT GAUGE

(57) Abstract: The present invention is an electronic height gauge utilizing new technology and includes a first column (Column 1) and a second column (Column 2), a display unit with a cover, a measuring scribe, a fixed capacitance sensor and a linear moving capacitance sensor. The fixed capacitance sensor is located on a flat surface on Column 1, flat surface having a length equivalent to the length of Column 1. The linear moving capacitance sensor is located inside the display unit cover positioned to face the fixed capacitance sensor. The fixed capacitive sensor and linear moving capacitive sensors are facing toward each other only, and do not make direct physical contact with the fixed capacitor sensor when the height gauge is operating in upward and downward movements. The fixed and moving capacitive sensors are instead making only electrical contact with each other when the height gauge is making upward and downward movements. This linear direct data noncontact sensor transfer system results in high accuracy of measurements, which also ensures the repeatability of accurate measurements. Also, since the fixed capacitance sensor and the linear moving capacitance sensor have no physical contact with each other, there is no wear and tear damage on either component part, thereby leading to a longer life of use with stability in accurate measurements and repeatability. Because the measuring system is comparatively simple, and easy to assemble and service and maintain compared to the existing rotary capacitive sensor electronic height gauges that exist on the market, the overall cost of production and maintenance is minimized. On the second column (Column 2), a simple rack and gear system is added. These gears of column 2 are connected to a hand wheel located on the rear of the display unit. The handwheel is used for making upward and downward vertical movements. This rack and gear system of column 2 of the present invention is only used to aid the same in making upward and downward movements, and does not affect the measuring accuracy of the height gauge, as it did in the height gauges that have existed on the market.

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